

~~WHAT IS CLAIMED IS:~~

1 1. A method of moderating traffic load on network servers in a network where
2 electronic mail is retained for retrieval from at least one mail server, the method
3 comprising:

4 permitting a mail request for a mail client to pass through a proxy server to the
5 mail server; and

6 attenuating subsequent mail requests for the mail client at the proxy server until a
7 predetermined condition has been satisfied.

1 2. The method of claim 1, wherein the predetermined condition is a predetermined
2 period of time.

1 3. The method of claim 2, wherein the predetermined period of time is
2 dynamically determined based on the amount of traffic load on the network.

1 4. The method of claim 1, wherein the predetermined condition is a combination
2 of a predetermined time period and receipt of a notification from the mail server that mail
3 has been received for the mail client at the mail server, whichever occurs first.

1 5. The method of claim 4, wherein the predetermined period of time is
2 dynamically determined based on the amount of traffic load on the network.

1 6. The method of claim 1, wherein attenuating subsequent mail requests is
2 suspended in the event it is determined that a user is manually initiating rapidly repeated
3 mail requests.

1 7. The method of claim 1, wherein attenuating includes blocking the subsequent
2 mail requests from transmission across the network to the mail server.

1 8. The method of claim 1, wherein the predetermined condition is independent of
2 time.

1 9. A method of managing bandwidth usage in a network where electronic mail is
2 retained for retrieval from at least one mail server, the method comprising:
3 selecting a time when network bandwidth load is low; and
4 pushing unretrieved mail messages to a proxy server at the selected time, wherein
5 the pushed mail messages are cached at the proxy server.

1 10. The method of managing bandwidth usage of claim 9, wherein selecting a time
2 is based on when bandwidth load at a predetermined point in the network falls below a
3 predetermined threshold.

1 11. The method of managing bandwidth usage of claim 9, wherein selecting a time
2 is based on a predetermined time of day.

1 12. A proxy server for use in a network where electronic mail is retained for
2 retrieval from at least one mail server, the proxy server comprising:
3 a processor, and
4 a memory including software instructions adapted to enable the proxy server to
5 perform the steps of:
6 permitting a mail request for a mail client to pass through the proxy server to
7 the mail server; and

attenuating subsequent mail requests for the mail client at the proxy server

until a predetermined condition has been satisfied.

13. The proxy server of claim 12, wherein the predetermined condition is a

predetermined period of time.

14. The proxy server of claim 13, wherein the predetermined period of time is

dynamically determined based on the amount of traffic load on the network.

15. The proxy server of claim 12, wherein the predetermined condition is a

combination of a predetermined time period and receipt of a notification from the mail server that mail has been received for the mail client at the mail server, whichever occurs first.

16. The proxy server of claim 15, wherein the predetermined period of time is

dynamically determined based on the amount of traffic load on the network.

17. The proxy server of claim 12, wherein attenuating subsequent mail requests is

suspended in the event it is determined that a user is manually initiating rapidly repeated mail requests.

18. The proxy server of claim 12, wherein attenuating includes blocking the

subsequent mail requests from transmission across the network to the mail server.

19. The proxy server of claim 12, wherein the predetermined condition is

independent of time.

1 20. A mail server for use in a network where electronic mail is retained for
2 retrieval from the mail server, the mail server comprising:
3 a processor, and
4 a memory including software instructions adapted to enable the proxy server to
5 perform the steps of:
6 selecting a time when network bandwidth load is low; and
7 pushing unretrieved mail messages to a proxy server at the selected time,
8 wherein the pushed mail messages are cached at the proxy server.

1 21. The mail server of claim 20, wherein selecting a time is based on when
2 bandwidth load at a predetermined point in the network falls below a predetermined
3 threshold.

1 22. The mail server of claim 20, wherein selecting a time is based on at a
2 predetermined time of day.

1 23. A network comprising:
2 at least one mail server where electronic mail is retained for retrieval by mail
3 clients;
4 a plurality of proxy servers distributed about the network;
5 wherein the mail server caches unretrieved mail messages at the proxy servers.

1 24. The network of claim 23, wherein unretrieved mail messages are cached at a
2 selected time.

1 25. The network of claim 24, wherein the selected time is determined to be when
2 bandwidth load at a predetermined point in the network falls below a predetermined
3 threshold.

1 26. The network of claim 24, wherein the selected time is a predetermined time of
2 day.

1 27. The network of claim 23, wherein the mail server synchronizes with the
2 plurality of proxy servers periodically to ensure that when changes are made to a message
3 on the mail server or on the proxy server that the changes are reconciled.

1 28. A network comprising:
2 at least one mail server where electronic mail is retained for retrieval by mail
3 clients;
4 a plurality of proxy servers distributed about the network;
5 wherein each of the proxy servers comprises:
6 a processor, and
7 a memory including software instructions adapted to enable the proxy
8 server to perform the steps of:
9 permitting a mail request for a mail client to pass through the proxy
10 server to the mail server; and
11 attenuating subsequent mail requests for the mail client at the proxy
12 server until a predetermined condition has been satisfied.

1 29. A network comprising:
2 a mail server where electronic mail is retained for retrieval by mail clients;

3 a plurality of proxy servers distributed about the network;

4 wherein the mail server comprises:

5 a processor, and

6 a memory including software instructions adapted to enable the mail server

7 to perform the steps of:

8 selecting a time when network bandwidth load is low; and

9 pushing unretrieved mail messages to a proxy server at the selected

10 time, wherein the pushed mail messages are cached at the proxy

11 server.

1 30. The network of claim 29, wherein selecting a time is based on when

2 bandwidth load at a predetermined point in the network falls below a predetermined

3 threshold.

1 31. The network of claim 29, wherein selecting a time is based on at a

2 predetermined time of day.